

ANNUAL REPORT: June 1, 2013 – May 31, 2014
(i.e., Summer 2013, AY 2013-2014)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: James P. Gibbs

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	<u>No. of Lab. Sections</u>
-------------------	--------------	--------------------	---------------------	-----------------------------

SUMMER:

FALL:

SPRING:

EFB413 *Introduction to Conservation Biology*, 3 cr , 83 students, no lab sections

EFB419 *Problem-solving in Conservation Biology*, 3 cr, 39 students, no lab sections

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT. For examples of service-learning in courses, see: <http://www.esf.edu/students/service/courses.htm>. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>
-------------------	--------------	--------------------	---------------------

3. Continuing Education and Extension (short courses, workshops, etc.)

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
-------------------	--------------	------------------------

Urban Ecology EST 220 1 lecture

Herpetology EFB 485 1 lecture

Diversity of Life EFB 211 2 lectures

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor _23_ and unofficial advisor _0_

B. Graduate Students: (list name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

MAJOR PROFESSOR

Arrigoni Jr., James E EFB Conservation Biology PhD Aug 2009

Fishman, Michael S EFB Conservation Biology MS Jan 2006
Kudalkar, Sahila EFB Conservation Biology MS Aug 2012
LaPan, Stewart EFB Fish & Wildlife Biology & Mgt, MS Aug 2012
Paltsyn, Mikhail Yurievich EFB Conservation Biology, PhD Jan 2013
Rachmansah, Angga EFB Conservation Biology, MS Aug 2013

CO-MAJOR PROFESSOR

MEMBER, STEERING COMMITTEE (other than those listed above)

Alvarez Yepiz, Juan Carlos, Doctor of Philosophy, EFB Ecology
Avis, Michelle L, Master of Science, EFB Fish & Wildlife Biology & Mgt
Chaudhary, Anand, Master of Science, EFB Conservation Biology
Cummings, Anthony, Doctor of Philosophy, Syracuse University, Geography
Devlin, Allison L, Doctor of Philosophy, EFB Ecology
Gurdak, Daniel J, Doctor of Philosophy, EFB Ecology
Helenbrook, William D, Doctor of Philosophy, EFB Conservation Biology
Holevinski, Robin A, Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt
Jones, Jaime B, Master of Science, EFB Conservation Biology
Koczek, Alison R, Master of Science, EFB Fish & Wildlife Biology & Mgt
MacDuff, Andrew J, Master of Science, EFB Fish & Wildlife Biology & Mgt
O'Connor, Megan E, Doctor of Philosophy, ESC Environ & Natural Resources Policy
Youker, Tess E, Master of Science, EFB Conservation Biology

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Garver, Michael Doctor of Philosophy, ERE Paper and Bioprocess Engineering Candidacy Examination Chair
Quesnelle, Pauline Doctor of Philosophy, Carleton University, Thesis Defense Chair

III. RESEARCH COMPLETED OR UNDERWAY

A. Departmental Research (unsupported, boot-legged; title - % time spent)

B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)

National Science Foundation/Population and Community Ecology: "How Environment, Physiology and Life History Interact to Determine Pattern in Animal Migration Proposal 1258062," J. P. Gibbs, S. Blake, S. Deem, J. Frair. 3/13-2/15. \$600,000. Postdoc now identified to be supported starting Sept 2014.

United States Fish and Wildlife Service Great Lakes Restoration Initiative, "Restoring critical habitat, mitigating multiple threats, and evaluating population status for bog turtle, eastern massasauga rattlesnake, and Houghton's goldenrod co-occurring in a single, exceptional, marl fen ecosystem, Bergen Swamp, Genesee County, NY" D. J. Leopold, K. T. Shoemaker, and J. P. Gibbs. 8/2012- 5/2015, \$128,064.00.

United States Agency for International Development (USAID), "Engaging Climber-Scientists and Indigenous Herders on Grazing and Climate Change Issues in the Altai Mountain Region of Mongolia," \$99,655 James P. Gibbs, Giorgos Mountrakis, Jennifer Castner. 2/13-7/14. Mikhail Y. Paltsyn supported.

U.S. National Park Service, "Assessment of Natural Resource Condition for Marsh-Billings-Rockefeller National Historical Park", Geri Tierney and James P. Gibbs, 1 September 2012 – 30 March 2014, \$40,000 Geri Tierney supported

NOAA/Ducks Unlimited, Coastal and Marine Habitat Restoration Project, Great Lakes Restoration Initiative, Farrell, J. M, D. J. Leopold, M. Mitchell, J. Gibbs, K. Schulz. 9/2011-8/2013, Recovery Act – Coastal Fisheries Habitat Restoration in the St. Lawrence River. \$274,722. Stewart Lapan supported

National Geographic Society, "Long distance migration of Galapagos tortoises: The importance of nesting and nest sites," S. Blake, W. Tapia, J. P. Gibbs, and M. Wikelski. \$20,000. 08/01/2012-07/31/2013.

U.S. Geological Survey, "Development of protocol and standard operating procedures for acoustic, camera and organismal monitoring of phenology." G. Tierney and J. P. Gibbs. \$18,477.00 09/01/2011 - 08/31/2013 G. Tierney supported

National Geographic Society, "Understanding Interactions among Three Globally Endangered Species -- the Waved Albatross, Giant Tortoise, and Giant Tree Cactus -- to Inform Conservation Management of Española Island, Galápagos," J. P. Gibbs, \$21,500, 6/1/10-5/31/12 (*Extended to 12/1/14*)

2. Research Proposals pending (include information as in B.1., above).

3. Research Proposals submitted, but rejected (include information as in B.1., above)

IV. PUBLICATIONS (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

A. Refereed Publications

Blake, Stephen, Charles B. Yackulic, Fredy Cabrera, Washington Tapia, James P. Gibbs, Franz Kümmerle, and Martin Wikelski. "Vegetation dynamics drive segregation by body size in Galapagos tortoises migrating across altitudinal gradients." *Journal of Animal Ecology* 82, no. 2 (2013): 310-321.

Bohn, Jessica L., Stewart AW Diemont, James P. Gibbs, Stephen V. Stehman, and Jorge Mendoza Vega. "Implications of Mayan agroforestry for biodiversity conservation in the Calakmul Biosphere Reserve, Mexico." *Agroforestry Systems* 88, no. 2 (2014): 269-285.

Dovčiak, Martin, Portia A. Osborne, David A. Patrick, and James P. Gibbs. "Conservation potential of prescribed fire for maintaining habitats and populations of an endangered rattlesnake, *Sistrurus c. catenatus*." *Endangered Species Research* 22 (2013): 51-60.

Hunter, Elizabeth A., and James P. Gibbs. "Densities of Ecological Replacement Herbivores Required to Restore Plant Communities: A Case Study of Giant Tortoises on Pinta Island, Galápagos." *Restoration Ecology* 22, no. 2 (2014): 248-256.

Hunter, Elizabeth A., James P. Gibbs, Linda J. Cayot, and Washington Tapia. "Equivalency of Galápagos giant tortoises used as ecological replacement species to restore ecosystem functions." *Conservation Biology* 27, no. 4 (2013): 701-709.

Myers, Andrew T., and James P. Gibbs. "Landscape-level Factors Influencing Bog Turtle Persistence and Distribution in Southeastern New York State." *Journal of Fish and Wildlife Management* 4, no. 2 (2013): 255-266.

Shoemaker, Kevin T., and James P. Gibbs. "Genetic connectivity among populations of the threatened bog turtle (*Glyptemys muhlenbergii*) and the need for a regional approach to turtle conservation." *Copeia* 2013, no. 2 (2013): 324-331.

Shoemaker, Kevin T., Alvin R. Breisch, Jesse W. Jaycox, and James P. Gibbs. "Reexamining the Minimum Viable Population Concept for Long-Lived Species." *Conservation Biology* 27, no. 3 (2013): 542-551.

Sirois, Angela Marie, James P. Gibbs, Alison L. Whitlock, and Lori A. Erb. "Effects of Habitat Alterations on Bog Turtles (*Glyptemys muhlenbergii*): A Comparison of Two Populations." *Journal of Herpetology* (2014).

B. Non-refereed Publications

Gibbs, J. P., 2014. *Chasing the World's Largest Sheep - Altai Argali - in the Russia-Mongolia Transboundary Zone*. Fair Chase, Spring 2014 34-38.

C. Papers Presented at Science Meetings (give title, date, occasion, and location)

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

Application of Phylogenetics to Conservation Biology, Darwin Day Keynote Speaker, Indiana State University, Feb 25-26, 2014

On the Brink: Saving Russia's Last Snow Leopards, The Explorers Club, March 31, 2014, New York City

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

“Viejo Sabio / Wise Sage”, Prometeo Program, National Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT), Ecuador, appointed 2012-2014.

2. Industrial and Commercial Groups, etc.

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Reviewer, Canada Research Chairs - Simon Fraser University

Reviewer / evaluator, Student Conservation Conference – New York, American Museum of Natural History, Oct 2013

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

Board member, The Wetland Trust

Board member, Altai Assistance Project

Member of the General Assembly, Charles Darwin Foundation (elected)

2. Professional Society Membership

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s) No. of manuscripts

Agency No. of proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc. Date Place

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

“Analyzing and Transforming Conflict to Create Sustainable Solutions for People and Wildlife,” May 12-15, 2014, Defenders of Wildlife, 1130 17th St. NW, Washington, DC (Trainer: Francine Madden, 20 participants)

D. Foreign Travel (Where, When, Purpose)

Ecuador, Galapagos Islands, May – June 2013, Espanola Island to conduct research (NSF and National Geographic projects)
Russia, Altai Republic, July and August 2013, meetings to advance projects and transit to Mongolia
Mongolia, Bayan Olgii Province, July and August 2013, herder surveys and rangeland research in Sielkhem National Park and adjoining areas (USAID project)
Ecuador, Galapagos, December 2013, Espanola Island to conduct research (NSF and National Geographic projects)
Mexico, Feb 2014, serve of INECOL’s external evaluation committee
Ecuador, Galapagos May – June 2013, Espanola Island to conduct research (NSF and National Geographic projects)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Member, Promotion and Tenure Committee
Director, Roosevelt Wild Life Station
Associate Chair

B. College-level

INECOL/SUNY-ESF seed grant competition coordinator

C. University-wide, including Research Foundation

VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE’S AND DEPARTMENT’S MISSION.

For our undergraduate students this past year I taught the two core courses for the Conservation Biology undergraduate

major and continue to advise many undergraduates, primarily those in the Conservation Biology major. I serve on many graduate committees, have a modest group of my own graduate advisees working on a variety of taxa and problems, and assisted recent graduate students to produce as lead authors 6 peer-reviewed publications this academic year.

For our Department I continue to invest significant effort in collaboration with key colleagues in the Department (mainly Frair and Leopold) to revitalize the Roosevelt Wild Life Station. In addition to cultivating potential donors, we undertook three biological surveys (Pennsylvania, New York, Tennessee) this year under the Roosevelt Station umbrella that involved our students and helped showcase our programs. After two years we are finally starting to realize some success in attracting funding and attention. In addition, I maintain a diverse portfolio of funded biodiversity conservation research and outreach programs in various parts of the world that has attracted attention to our Department from a variety of media sources during the last year.

For myself professionally I (1) completed a fellowship as “Viejo Sabio” or “Wise Sage” within the Prometeo Program of the National Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT), (2) made good progress with collaborators in advancing a community-based endangered wildlife conservation program along the Altai Russia/western Mongolia border that has ultimately garnered very significant outside support for our local collaborators, and (3) I continue to be heavily involved in Galapagos Conservancy-based projects to advance a variety of conservation programs in the Galapagos Archipelago, most notably the newly initiated giant tortoise conservation initiative.

IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)

The year ahead will continue to be devoted to advancing Roosevelt Wild Life Station initiatives, overseeing our new NSF-funded giant tortoise movement ecology research project, continuing to assist Galapagos Conservancy in advancing various projects in Galapagos, collaborating on curriculum development for conservation biology graduate programs in Brazil, and improving delivery of my own undergraduate courses. New editions of the *Fundamentals of Conservation Biology* and *Problem-solving in Conservation Biology and Wildlife Management* textbooks have been requested from their publishers and I hope to help advance those efforts if and when time permits.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2013

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, professional society, and public service

2. Fall Semester 2013

- a. Course(s) to be offered
- b. Proposed research activity

c. University, Professional society, and public service

3. Spring Semester 2014

a. Course(s) to be offered

b. Proposed research activity

c. University, professional society, and public service